

THE  
Touchstone:

OR  
**PARADOXES**

brought to the test  
of a rigorous and fair exami-  
nation, for the settling of  
dubious points to the  
satisfaction of the  
curious and con-  
scientious.



QUOD  
VERUM *atque DECENS*  
CURO *et ROGO*  
*et omnis in hoc sum.*

Horat.

PART THE I ————— MDCCXXXII  
Printed for J. NOON in Cheapside

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# JOHN WHITE

Jun. Esq;

## Walling-Wells.

SIR,

YOU will pardon this address from an unknown friend, for the sake of the good design. The carrying-on an undertaking of this nature, so as to answer the end I have propos'd, will require the assistance of the ablest hands. it behov'd me, therefore, as an earnest enquirer after truth, to excite the curiosity of the good and wise, by making use of a name so well-known among them, and so dear to them.

To atone, in some measure, for this trespass; you will find, in the following piece, that, out of regard to your taste, I have endeavor'd to save time and trouble to my readers; and, I hope, added evidence to my ar-

gements; by stripping the subjects of every thing foreign to them: and, as what I have offer'd to the test, is by way of enquiry, with an absolute indifference on which side truth shall be found; you may depend upon it, that, whatever shall be suggested in the farther examination of any point, by what hand, and in what manner soever; shall be considered with the utmost attention, candor, and conciseness; in order to give every thing its due weight, and come to a more satisfactory determination.

Were it only on your account, I would avoid the common mode of managing a debate by drawing the passions into it: and should be loth to incur the guilt of adding, to the immense loads of controversial lumber, one line unworthy of your regard, or unbecoming

#### AN HONEST FREE-THINKER.

THE

# Touchstone:

OR

## PARADOXES

### brought to the test

etc.

I

## Lord's Supper

TO WHOM

to be administer'd?

**A**DULT persons only are generally suppos'd to be the proper subjects of this sacrament: but,

2. Children also seem to have a title to it. In favor of this opinion,

3. For Authorities, hardly any thing, perhaps, has a better recommendation. — It was the practice of the primitive church in the most early times after the apostles — It was universally observ'd by the greek church ever since — and by the latin, for

about a thousand years; and never laid aside by them, till they became most grievously corrupted; and till the monster of transubstantiation appear'd in the world; when the same superstition occasion'd the abolishing this custom, and the taking-away the cup from the laity, together; both which were professedly done by the same councils — and, when the latins laid it aside, it still continued among the purer christians of *bohemia*, who bore such a noble testimony against the superstition, idolatry, and tyranny of the roman church; and was kept in use among them, 'till within about half a century of the reformation.

4. For *Arguments* — in Effect, it may be infer'd from the following expressions: (1) " This " " is my body, which was broken for you". 1 Cor. 11. 24. for infants, no doubt, as well as for adult christians: if so, and they have done nothing to forfeit the benefit of it; why should not the signs and pledges of it belong to them also. (2) " The " bread which we break, is it not the communion " of the body of Christ: the cup &c." 1 Cor. 10. 16. Now, if infants have an interest in the body and blood of Christ; why not a title to the signs of that communion in the body and blood of Christ. (3) " For we, being many, are one bread, and one " body: for we are all partakers of that one bread." 1 Cor. 10. 17. Now, if the partaking of that bread does signify and evidence all the members of the visible church to be but one body; and infants must not partake of it: how can their unity with the church, or their being of that body, be signified, or prov'd, by it's being receiv'd by others, when they themselves are excluded. — ad Hominem, it may be argued that They, who admit the baptism of infants, ought also to admit their communion; both standing upon the same footing; the reasons for, and objections against infant-

fant-baptism, being equally applicable to infant-communion. (1) In behalf of infant-baptism, it is alleg'd that infants are members of the visible church, capable of salvation (1 Cor. 7. 14. Luk. 18. 15.) &c. that therefore they are entitled to that means of salvation; and ought to be initiated into the church, by the ordinance, which God has appointed for that purpose. By parity of reason, it is evident that they ought to be treated as members; and not excluded from any of the privileges, which God has granted to his church in common, &c. (2) Against infant-baptism it is pretended that infants are incapable of what is requir'd to baptism, viz. faith and repentance; and that therefore they have no title to it. In answer to which it is generally said, that though they may not be capable of all the ends of it, yet they are of some; and those, such as are a sufficient reason for their being admitted to it. In like manner it may be said, with regard to the eucharist, that though they may not be capable of those mental acts, with which the adult should come to this ordinance; yet they are capable of receiving the blessing of Christ, and the new covenant. (3) So that this argument, from children's incapacity, cannot reasonably be of any force to debar them from these federal rites, of the one and the other sort, under the gospel. and this we have the greater reason to suppose; because, though their incapacity was the same under the law, yet did it not exclude them from the like federal rites and institutions; or even from any of the many sacraments, which the Israelites partook of.

5. The *advantages*, that would attend the revival of this practice, would be such as these: (1) The frightfulness of the ordinance would be lessen'd by people's growing-up in the use of it; and consequently our communions would be fuller, and more frequent. (2) Hereby also good impressions would be made on children: at least young persons would

be brought more under disciplin: and the rulers of the church (who have now no handle to proceed against them, as they grow-up, and become dissolute) would have a greater advantage for dealing with them; whence, in all probability, they themselves would be more circumspect; and their parents more careful of their education, to prevent their incurring an ecclesiastical censure, or the loss of that privilege which is the badge of their profession.

7. The *main objection* against this opinion is founded on the incapacity of infants to do several things, that are requir'd to be done by the institution. e. g. "Do this in remembrance of me": Luk. 22. 19. 1 Cor. 11. 24. "Let a man examin "himself, and so let him eat, &c." 1 Cor. 11. 28. "Discerning the lord's body, &c." 1 Cor. 11. 29. Answ. (1) In general (1) These directions, according to their common acceptation, are to be understood to oblige those only, that are capable of observing them; yet so, as not to exclude such, as, by reason of their age, are uncapable. In like manner, that command, "If any one will not work, "let him not eat" (2 Thess. 3. 10.) must be, so, limited to such as are able to work; as not to exclude others, who must eat, though they cannot work. (2) Children, among the Israelites, were not hinder'd from eating the passover (Exod. 12. 3, 4, 26, 27. Maimon. ap. Ainsw. in exod. 12. 26. Lightf. temple-service. vol. i. c. 13. p. 959.) though the design of that feast was to keep-up the remembrance of their delivery out of Egypt; just as that of the eucharist is to keep-up the remembrance of our redemption by Christ. (3) If this objection be valid, we may, by the same rule, exclude children from all the parts of worship. Thus, for instance, children are not, according to this way of arguing, to be suffer'd to pray, 'till they can pray in faith. For, the apostle (Jam. 1. 6.) prescribes this as a rule

rule for him that prays: "Let him ask in faith, nothing wavering ; " and adds: "Let not him who wavers, think that he shall receive any thing of the lord." But, does any one think, he is not to put his children upon praying by themselves, or upon joining in prayer with others ; 'till they can pray in faith ? The like faith is also necessary in hearing the word. for, "The word preach'd does not profit, not being mixt with faith in them that hear it." Nay, we are requir'd (1 Pet. 2. 2.) "to lay aside all malice, and all guile, and hypocrisies, and envies, and evil speakings ; and thus to desire the sincere milk of the word, that we may grow thereby." And the danger of hearing the word unprofitably is very awfully represented, as well as that of eating and drinking unprofitably. for (2 Cor. 2. 16.) ministers "are to them, that perish, the favor of death unto death ; as they are to them, that are sav'd, the favor of life unto life." (II) In particular, If these directions are understood, as the original and context seem to require; it will appear that children are not excluded by them. for (1) With respect to the command of Christ, "Do this in remembrance of me :" since it may well import that his disciples, as a body or society, should keep up the remembrance of his passion in the world, by holding this appointed feast, the memorial thereof: certainly infants, being part of that society, are capable of joining with it in this feast, which is held for such a purpose ; and, thereby, of shewing the lord's death 'till he come. Or, If it be interpreted, according to the frequent use of the original word in the septuagint (Lev. 24. 7. Num. 10. 10. &c.) "Do this (εἰς τὸ εἰδύλλιον αὐτοῦ) for a memorial of me before God :" as this memorial of Christ's death is made in the name and behalf of the whole church, infants as well as grown persons ; there is the more reason

why

why it should be signified to be made for them by all partaking of it. (2) As to the apostle's advice, "Let a man examin himself, and (So, that is) accordingly (or agreeably to the institution of Christ, which I have now related to you) let him eat &c." as to this advice I say, thus understood; it is plain that it does not, in the least, concern infants: inasmuch as they are not capable of such irregularities, as the apostle complain'd-of; and about which he would have them examin themselves. (3) In like manner, Not-ditcerning (or discriminating) the lord's body; that is, not-making a difference between the lord's supper and a common meal, was another irregularity, which the apostle blames the Corinthians for. Now, this could not be owing to children; and therefore does not at all concern them. on the contrary, this disorder being redress'd; the bread, in the lord's supper, would be given to them not as common bread, but as the body of the lord; and so, by their eating it with worthy partakers of it, the lord's body would be duly discerned or discriminated from common food.

## II

## Washing one another's feet

A SACRAMENT

instituted by Christ,

**O**F which we have the following account in the gospel of the beloved disciple, 13. 1 — 18. "Now (πρὸς τῆς ἑορτῆς τῆς πάσχα εἰδὼς ὅτι ἦν ἀλεῖται ἀντὶ τοῦ ὁμοίου) Jesus knowing that before (the

"usual

“ usual time for eating) the feast of the passover  
“ (or paschal lamb; this not being done till after  
“ three in the afternoon on the passover-day) his  
“ hour would have been come that he should de-  
“ part out of this world unto the father; (ἡ  
“ δέπτυς γερουσίας) and being at (the paschal) supper  
“ (of unleaven'd bread and bitter herbs) he rises  
“ from it; and (before the ordinary meal, after  
“ which he instituted the eucharist) puts-off his  
“ (upper) garments; takes a towel, and girds him-  
“ self; then he pours water in a bason in order to  
“ wash the disciples feet, and to wipe them with  
“ the towel with which he was girded. So he  
“ comes to Simon Peter; and Peter said to him:  
“ Lord, dost thou wash my feet? Jesus answer'd,  
“ and said to him: What I do, thou knowest not  
“ now; but thou shalt know by-and-by. Peter  
“ said to him: Thou shalt never wash my feet.  
“ Jesus answer'd him: If I wash thee not, thou  
“ hast no part with me. Simon Peter said to him:  
“ Lord, not my feet only, but my hands and head.  
“ After he had wash'd their feet, and had taken  
“ his garments, and was fane-down; he said to  
“ them: Know ye what I have done to you? Ye  
“ call me master, and lord; and ye say well: for I  
“ am so. If I then, your lord and master, have  
“ wash'd your feet; ye ought also to wash one a-  
“ nother's feet: for I have given you an example,  
“ that ye should do as I have done to you. For  
“ the servant is not greater than his lord, neither  
“ he that is sent greater than he that sent him. If  
“ ye know these things; happy are ye, if ye do  
“ them.”

2. This is an authentic account of this institu-  
tion; which, though generally neglected, seems to  
have as much to recommend it for a *standing ordinance of the gospel*, as either baptism, or the lord's  
supper; whether we consider the time, when it was  
appointed;

appointed ; or the circumstance, with which it was perform'd ; or the command by which it was enjoin'd. for — To run the parallel between this and the lord's supper,

3. As to the *time*, it is true they were both transacted after the paschal supper, on the great occasion of his being shortly to be crucified : But then,

4. As to the *circumstances* of both, it must be acknowledg'd that the difference is much to the advantage of this institution. for (1) Of the eucharist it is only said “ As he was eating he took bread, “ broke, and gave it ;” so that this might seem to be but an occasional business : but, in this, with a more solemn apparatus, “ he rose-up, laid-by his “ garments, girded himself, pour'd-out water, “ wash'd their feet, and wip'd them.” (2) In the eucharist “ he only gave the bread to those that “ were next him,” and they to the rest from hand to hand : but, here, he wash'd the feet of all. (3) The blessing and giving the bread and wine, after supper, was a practice common among the Jews, us'd by all masters of families on that occasion : but the master's rising-up and washing the feet of his servants, as in this case, was something extraordinary. (4) In the eucharist, Christ does not say “ If “ ye do not eat of this bread, and drink of this “ wine ; ye shall be the worse for it :” but, here, he says expressly to Peter “ If I wash thee not, thou “ hast no part with me ;” hereby signifying the necessity of this ceremony.

5. As to the *precept* enjoining the use of them : for the observation of the eucharist there is no such thing as a command in two of the evangelists ; and, in the third, it is only said, after he had given them the bread, “ Do this in remembrance of me ;” which seems, there, to mean no more than what is commanded in the other two, by the words “ Take, “ eat : ” But, here, Christ sits-down again, and

puts them upon reflecting on what he had done ; telling them positively that they ought to wash one another's feet. for, says he, urging the precept, " I have given you an example, that ye should do to others, as I have done to you ; " and not only enforces it with a reason, " for the servant is not greater than his lord ; " but encourages them in the observance of it, by assuring them that " they should be happy, if they did so."

6. *Upon the whole*, therefore, in this institution of our saviour, there is nothing wanting to make it what we call a sacrament. Nay, if we examin the account of it according to the definition of a sacrament in the english liturgy ; we shall find it perhaps to agree with it more exactly, than the account we have of the eucharist, either in the scripture, or in the catechism of the church of England. The definition is this : " A sacrament is an outward and visible sign of an inward and spiritual grace given unto us, ordain'd by Christ himself, as a means whereby we receive the same, and a pledge to assure us thereof." To apply (1) In washing, the outward sign is water ; the inward grace is purity of heart ; what is to be done was ordain'd by the command and example of Christ ; and the doing it is a means of receiving the grace, and a pledge to assure us thereof ; for we find Christ himself declar'd that " He, who is wash'd, is clean ; " and that " Happy were they, if they follow'd his example." (2) But, in the eucharist, there is no inward grace answering to the outward sign : only we are told, that the inward part, or thing signified, is the body and blood of Christ. But, allowing that some grace were signified by the outward sign ; yet we have no authority from scripture to affirm, that the partaking of the outward signs is a means of receiving any such grace, or a pledge to assure us thereof ; any further than, in general, that Christ

must be well pleas'd with every instance of our regard to his commands.

7. *These things being so:* it seems highly probable, that, if custom and education, which have begot in the hearts of people so great a reverence for the supper; had happen'd to have been on the side of washing one another's feet; this would have been receiv'd as readily, and retain'd as tenaciously as that; seeing it has, at least, equal foundation in scripture.

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### III

## Body

EXISTS

*in the mind only.*

1. **W**HAT is that, you say? Is there *nothing* in nature but spirit and ideas? — Nothing.

2. What then do you take the *external world* to be? — A system of the various combinations of ideas; which arise in our minds, according to the rules or methods, wherein the mind, we depend-on, excites them in us.

3. Is there then nothing without the mind, that is *the means of exciting* these ideas? — For aught that we can tell, nothing at all. Sensations we have: but they do not inform us that any thing exists without the mind, or unperceiv'd, like what is perceiv'd; nor can we infer the existence of any such thing from what is perceiv'd; there being no necessary

necessary connexion between our sensations and such supposed beings. It is evident from the phaenomena of dreams, deliriums, &c. that we may be affected with the ideas we now have, though there were no bodies existing without us. nor does the supposition of external bodies at all forward us in conceiving how our ideas should come to be produc'd. The materialists own themselves unable to conceive in what manner body can act on spirit, or how it should imprint any idea on the mind. To suppose, therefore, bodies existing without the mind, is little else than to suppose, that God has created innumerable beings entirely useless, and serving to no purpose at all. In short, though there were external bodies, it is impossible we should ever come to know it: and, if there were none, we should have the same cause to think there were, that we now have.

4. But, though the ideas themselves do not exist without the mind; may there not be things like them, whereof they are *copies* or *resemblances*, which exist without the mind? — Certainly, an idea can be like nothing but an idea: a color or figure can be like nothing else but a color or figure. But, I would further ask, whether those suppos'd originals, whereof our ideas are suppos'd the pictures, be, themselves, perceptible, or not. If they be; they are ideas: if they be not; I appeal to your self, whether it be sense to say "a color is like "s somewhat, which is invisible; hard or soft, like "s somewhat intangible &c."

5. If this be the case; pray, *how came mankind to suppose any such external objects?* — Why, that may be worth while to consider; that, having observ'd the gradual ceasing of such motives, you may withdraw the assent grounded on them. (1) First, therefore, it was thought that color, figure, motion, and the rest of the sensible qualities, did really

exist without the mind: and, for this reason, it seem'd necessary to suppose some unthinking substratum, wherein they did exist, since they could not be conceiv'd to subsist by themselves. (2) Afterward, in process of time, people being convinc'd that colors, sounds, and the rest of the sensible secondary qualities, had no existence without the mind; they stripp'd this substratum of these qualities, leaving only the primary ones, extension, figure, motion, &c. which they still conceiv'd to exist without the mind; and, consequently, to stand in need of a material support.

6. And, what have you to say to that? is there not a great deal of difference between the primary and secondary qualities? — Yes: but, what avails the distinction? the primary are inseparably united with the secondary; and cannot, even in thought, be abstracted from them; and therefore must only exist in the mind. for, can any man conceive the extension and motion of a body without all the other sensible qualities? for my part, I find it impossible to frame an idea of a body extended and moving, without giving it some color &c. In effect, extension, figure, and motion, abstracted from all other qualities, are inconceivable. where the others, therefore, are; there these too must be; that is, in the mind, and no where else.

Well, you may say what you will: but I cannot get-off the way of thinking, I have always been us'd to — Let us see, then, if this point may not be prov'd *from your own principles*, in your usual way of reasoning. The secondary qualities, you allow, have no existence in matter, or without the mind. the reasons, you give for it, I apprehend, will equally hold against all sensible qualities whatsoever. E. g. Heat and cold, say you, are only affections of the mind, not-at-all patterns of real things existing in corporeal substances: for, that the

the same body, which seems cold to one hand, seems warm to another &c. Now, why may we not as well argue that figure and extension are not patterns of qualities existing in matter; since, to the same eye, at different stations, or to eyes of different structure at the same station, they appear various? Again, sweetness, 'tis prov'd, does not exist in the sapid thing; because, the thing remaining unalter'd, the sweetness is chang'd into bitterness; as in a feverish, or otherwise vitiated palate. And, is it not as reasonable to say that motion does not exist out of the mind? since, if the succession of ideas in the mind become swifter, the motion, 'tis acknowleg'd, will appear slower, without any external alteration.

What you have said, I must own, has some weight in it: and yet I know not how to come into it. Pray, see if you can *sum-up the main evidence* of what you have advanc'd, in such a compass, as I may take-it-in without confusion. — Well, then, consider it in this light: That our thoughts, passions, and imaginations exist only in the mind; you will readily allow: and, that the various sensations impress'd on the mind, whatever objects they compose, cannot exist otherwise than in a mind perceiving them, you will be satisfy'd, if you will but attend to the meaning of the word "exist," when applied to sensible things. The table, I write on, exists; that is, I see, and feel it: and were I out-of my study, I should say it existed; that is, were I in my study, I should see and feel it, as before. there is an odor; that is, I smelt it &c. But the existence of unthinking beings, without any relation to their being perceiv'd, is unintelligible: their existence is their being perceiv'd: nor is it possible they should have any existence out-of the mind that perceives them.

I cannot

I cannot well deny but what you say is right: yet, in spite of my conviction, the more I think of it, the more I find my self forc'd into my old way of thinking by a number of *difficulties*, that crowd into my mind; and — I do not at all wonder at it: Inveterate prejudices, and the delusion of words, are not easily got-over, or guarded-against. However, if you please to let me know what those difficulties are; I will endeavor to give you all the satisfaction I can.

10. Well, then, in the first place, By these principles of yours, all that is *real and substantial* in nature is banish'd out of the world: and, instead thereof, a chimerical scheme of ideas takes place. What becomes of the sun, moon, and stars? what must we think of houses, rivers, mountains, trees, stones; nay, even of our own bodies? — I do not argue against the existence of any one thing, that we can apprehend, either by sense, or reflexion. That the things I see with my eyes, and touch with my hands, do exist, really exist; I make not the least question: the only thing, whose existence I deny, is that, which philosophers call matter, or corporeal substance: and, in doing of this, there is no damage done to the rest of mankind; who, I dare say, will never miss it. The atheist, indeed, will want the color of an empty name to support his impiety; and the philosophers may possibly find, they have lost a great handle for trifling, and disputation: but, that is all the harm, I can see done.

11. At least you destroy all *corporeal substances*. — If the word substance be taken, in the popular sense, for a combination of sensible qualities, such as extension, solidity, weight, color, &c. This I cannot be accus'd of taking away; but, if it be taken, in a philosophic sense, for the support of accidents or qualities without the mind;

then

then indeed, I acknowlege that I take-it-away; if one may be said to take-away that, which never had any existence, not even in the imagination.

12. But, after all, it sounds very harsh, to say we eat and drink ideas; and are cloathed with ideas. — I acknowlege it doth so: the word idea not being us'd, in common discourse, to signify the combinations of sensible qualities, which are called things. And it is certain, that any expression, which varies from the familiar use of language, will seem harsh, and ridiculous: but this does not concern the truth of the proposition; which, in other words, is no more, than this: "We are fed and cloath'd with those things, which we perceive immediately by our senses."

13. But your notions are *inconsistent with several sound truths* in philosophy, and mathematics. For example, the motion of the earth is now universally admitted by astronomers, as a truth grounded on the clearest and most convincing reasons. But, on your principles, there can be no such thing. for, motion being only an idea; it follows, that, if it be not perceived, it exists not. but the motion of the earth is not perceiv'd by sense. — That tenet, if rightly understood, will be found to agree with the principles I have premised. for, the question "Whether the earth moves or no," amounts, in reality, to no more than this (viz. from what has been observ'd by astronomers) that, if we were plac'd in such and such circumstances, and such or such a position and distance, both from the earth and sun; we should perceive the former to move among the choir of the planets, and appearing in all respects like one of them: and this, by the establish'd rules of nature, which, we have no reason to mistrust, is reasonably collected from the phænomena. We may, from the experience we have had of the train and succession of ideas in our minds,

often

often make, I will not say, uncertain conjectures, but sure and well-grounded predictions, concerning the ideas we shall be affected-with, pursuant to a great train of actions; and be enabled to pass a right judgment of what would have appear'd to us, in case we were plac'd in circumstances very different from those we are in at present. Herein consists the knowlege of nature, which may preserve its use and certainty, very consistently with what has been said hereupon. (NB) It will be easy to apply this to whatever objections of the like sort may be drawn from the magnitude of the stars, or any other discoveries in astronomy or nature.

14. But, on your principles, how can we account for the curious organization of plants, and the admirable *mechanism* in the parts of animals. If it be a spirit, that immediately produces every effect by an act of his will; we must think all that is fine and artificial in the works, whether of man or nature, to be in vain. —— Though there were some difficulties, relating to the administration of providence, and the uses by it assign'd to the several parts of nature, which I could not solve by the foregoing principles; yet, this objection would be of small weight against the truth and certainty of such things, as may be prov'd *a priori*, with the utmost evidence and rigor of demonstration. But neither are the receiv'd principles free from the like difficulties. for it may still be demanded, to what end god should take those round-about methods of effecting things by instruments and machines, which we cannot deny might have been effected by the mere command of his will, without all that apparatus. nay, if we narrowly consider it; we shall find the objection may be retorted, with greater force, on those, who hold the existence of those machines without the mind.

for, it is evident that solidity, bulk, figure, motion, &c. have no activity or efficacy in them, so as to be capable of producing any one effect in nature: whoever, therefore, supposes them to exist (allowing the supposition possible) when they are not perceiv'd, does it manifestly to no purpose; since the only use that is assign'd to them, as they exist unperceiv'd, is, that they produce those perceptible effects, which, in truth, cannot be ascrib'd to any but spirit. But, to come nigher the difficulty, it must be observ'd, that though the fabrication of all those parts and organs be not absolutely necessary to the producing any effect; yet it is necessary to the producing of things in a constant, regular way, according to the laws of nature. And, the reason, why ideas are form'd into machines, (that is, artificial and regular combinations) is the same with that for combining letters into words. That a few original ideas may be made to signify a great number of effects and actions, 'tis necessary they be variously combin'd together: and, to the end their use be permanent and universal, these combinations must be made by rule, and with wise contrivance. By this means abundance of information is convey'd to us, concerning what we are to expect from such and such ideas: which, in effect, is all that I conceive to be distinctly meant, when it is said, that, by discerning the figure, texture, and mechanism of the inward parts of bodies, whether natural or artificial, we may attain to know the several uses and properties depending thereon; or the nature of the thing. Hence it is evident that those things (which, under the notion of a cause co-operating or concurring to the production of effects, are altogether inexplicable, and run us into great absurdities) may be very naturally explain'd, and have a proper and obvious use assign'd them; when they are consider'd only as marks, or

signs for our information. And it is the searching-after, and endeavouring to understand this language (if I may so call it) of the author of nature; that ought to be the employment of the natural philosopher; and not the pretending to explain things by corporeal causes; which doctrine seems to have too much estrang'd the minds of men from the active principle, that supreme and wise spirit, in whom we live, move, and have our being.

15. After all, It is plain, beyond contradiction, that we see things at a distance, and actually without. — (1) In dreams and deliriums we oft perceive things, as existing, at a great distance off; and yet, for all that, those things are acknowleg'd to have their existence only in the mind. (2) Again, let a man, while he looks upon any object, as suppose the moon, press or distort one of his eyes with his finger; and he will perceive two moons, at some distance from each other. Now, both these moons are equally external, or seen by us as external; and yet one, at least of these, is allowedly not-external; there being but one moon suppos'd to be in the heavens, or without us. And, hence, indeed, it follows that neither of them are external; since there is not any one mark or sign of the extreinity of the one, which is not in the other. (3) In like manner, when we see objects in a looking-glass; it is hard to say they exist in the glass; or, in short, any where but in the mind that perceives them. (4) But, for the fuller clearing of this point, it ought to be observ'd what is meant, in common discourse, when one says, "That, which he sees, is at a distance from him." suppose, for example, that, looking at the moon, I should say, it were fifty or sixty semidiameters of the earth distance from me: let us see what moon this is spoken-of. it is plain, it cannot be the visible moon, or any thing like the visible moon. or that which I see; which is only a

round, luminous plain, of about thirty visible points in diameter. for, in case I am carried from the place, where I stand, directly towards the moon ; it is manifest the object varies still as I go-on : and, by the time that I am advanc'd fifty or sixty semidiameters of the earth ; I shall be so far from being near a small luminous flat ; that I shall perceive nothing like it ; this object having long since disappear'd : and, if I would recover it ; it must be by going-back to the earth, from whence I set-out. In this, and the like instances, the truth of the matter stands thus : Having, of a long time, experienc'd certain ideas, perceptible by touch (as distance, tangible figure, and solidity) to have been connected with certain ideas of sight ; I do, upon perceiving these ideas of sight, forthwith conclude, what tangible ideas are, by the wonted ordinary course of nature, like to follow. looking at an object, I perceive a certain visible figure, and colour, with some degree of faintness, and other circumstances ; which, from what I have formerly observ'd, determin me to think, that, if I advance forward so many paces, miles, &c. I shall be affected with such and such ideas of touch. but, that one might be deceiv'd by these suggestions of sense, and that there is no necessary connexion between visible, and tangible ideas suggested by them ; we need go no farther than the next looking-glass, to be convinc'd. From what has been said, it is manifest that the ideas of space, outness, and things placed at a distance, are not, strictly speaking, the object of sight. they are no otherwise perceiv'd by the eye than by the ear. sitting in my study, I hear a coach drive along the street : I look through the casement, and see it : I walk out, and enter into it. thus, common speech would incline one to think that I heard, saw, and touched the same thing, viz. the coach. it is, nevertheless,

vertheleſſ, certain, that the ideas intromitted by each ſenſe are widely diſſerent, and diſtinct from each other: but, having been obſerv'd conſtantly to go together, they are ſpoken-of as one and the ſame thing. by the variation of the noife, I perceive the diſtinct diſtances of the coach; and know that it approaches before I look-out; after the ſame manner as I do by the eye: I do not, nevertheless, ſay, I hear diſtance; in like manner as I ſay that I ſee it: the ideas perceiv'd by hearing not being ſo apt to be conſounded with the ideas of touch; as thoſe of ſight are. A man is eaſily convinc'd that bodies are not properly the objeſt of hearing; but only ſounds; by the mediation whereof, the idea of thiſ or that body, or diſtance, is ſuggested to his thoughts: but then one is, with more diſſiculty, brought to diſcern the diſference there is be-twiſt the ideas of ſight and touch; though it be certain, a man no more ſees and feels the ſame thing, than he hears and feels the ſame thing. one reaſon of which ſeems to be thiſ: it is thought a great abſurdity to imagin that one and the ſame thing ſhould have any more than one ex-tension and figure. but, if we take a close and ac-curate view of the matter; it muſt be acknowledg'd, that we never ſee and feel one and the ſame thing; that, which is ſeen, is one thing; and that, which is felt, is another. if the viſible figure and ex-tension be not the ſame thing with the tangible figure and ex-tension; we are not to infer that one and the ſame thing has diuers ex-tensions: the true con-ſequence is, that the objeſts of ſight and touch are two diſtinct things. It may, perhaps, require ſome thought rightly to conceive thiſ diſtinction: and the diſſiculty ſeems not a little encreas'd, because the combination of viſible ideas has conſtantly the ſame name as the combination of tangible ideas, where-with it is connected: which does, of neceſſity, a-

rise

rise from the use, and end of language. whenever, therefore, we say "an object is at a distance;" whenever we say "it draws-near, or goes farther-off;" we must always mean it of the latter sort, which properly belong to the touch; and are not so truly perceiv'd, as suggested, by the eye; in like manner as thoughts by the ear. no sooner do we hear the words of a familiar language pronounc'd in our ears, but the ideas corresponding there-to present themselves to our minds: in the very same instant, the sound and the meaning enter the understanding: so closely are they united, that it is not in our power to keep out the one, except we exclude the other also: we even act in all respects, as though we heard the very thoughts themselves. so, likewise, the seconday objects, or those which are only suggested by sight, do often more strongly affect us, and are more regarded, than the proper objects of that sense; along with which they enter into the mind, and with which they have a far more strict and near connexion, than ideas have with words. hence it is we find it so difficult to discriminate between the immediate and mediate objects of sight; and are so prone to attribute to the former, what belongs only to the latter. they are as-it-were more closely twisted, blended, and incorporated together: and the prejudice is confirm'd, and riveted in our thoughts by a long tract of time, by the use of language, and want of reflexion.

16. At present, I do not find any farther scruples: but, after all, *what end* does it answer to puzzle one's brains, thus, about such metaphysical subtleties? — Were there no other advantages from such speculations; I dare say you will allow that they are useful to sharpen the faculties, and rectify every wrong bias of the understanding; which is undoubtedly a matter of no small moment toward regulating the conduct of life: but, not to mention

the

the many advantages which result from the discovery of so fundamental a truth, because, perhaps, you may not be well settled in the belief of it; I shall only point-out to you a few of those absurdities and mischiefs, that are owing to the error you so tenaciously adhere-to. If you please but to reflect a little on your unperceiv'd *you-know-not-what*, which you suppose *you-know-not-why*; I am apt to think you will find that it has been a very plentiful source, as I said, of absurdity and mischief. for, in short (1) It is the very root of *scepticism*. for, so long as men thought that real things subsisted without the mind, and that their knowlege was only so far forth real, as it was conformable to real things; it follows they could not be certain that they had any real knowlege at all. for, how can it be known that the things, which are perceiv'd, are conformable to those which are not perceiv'd, or exist without the mind? (2) It is the main pillar of *atheism*. All the monstrous systems of atheists, in all ages, have so visible and necessary a dependence on it; that, when this cornerstone is once remov'd, the whole fabric cannot choose but fall to the ground. nay, so great a difficulty has it been thought to conceive matter produc'd out-of nothing; that the most celebrated among the ancient philosophers, even of those who maintain'd the being of a god; have thought matter to be uncreated, and coëternal with him. (3) It is a great occasion of *idolatry*, in all its various forms. Did men but consider that the sun, moon, and stars, and every other object of the senses are only so many sensations in their minds, which have no other existence but barely being perceiv'd; doubtless they would never fall-down, and worship their own ideas: but rather address their homage to that eternal invisible mind, which produces and sustains all things. (4) It is no small cause of *perplexity* both to divines and philosophers, in their enquiries after truth;

truth: as might abundantly be made-out, were it not unseasonable, in a great many particulars of great importance. Think a little of the following articles, Incarnation, Resurrection, Divisibility, Essence, Space, Species: and, for the better fixing the principles of knowledge, I wish you

A SOUND MIND IN A SOUND BODY;  
or, to speak more accurately,

A SOUND BODY IN A SOUND MIND.

## Sailing in the Air

not impracticable.

1. TO make way for the easier conception of this project (since the just magnitude of the machinery for that purpose would be too expensive to undertake the execution of it without good grounds) I shall give an instance of *an experiment* of the like nature, which may easily be put in practice, and will sufficiently shew the probability of bringing this to bear.

2. Take a little boat of lead; which, being heavier than water, will easily sink in it; and tie to each end of it, with cords of an equal length, two glass balls; then put the whole into water, and you will observe the boat hang on the balls, and swim freely to and fro.

3. Now, the cause of this must be, that the balls, with the air enclos'd, are specifically lighter than the water; that is, than so much water as would have filled them.

Hence

4. Hence it is evident that nothing is wanting to be able to sail in the air, but hollow balls specifically lighter than air.

5. The possibility of procuring such balls will appear from the following calculation, founded on fair experience and geometrical demonstrations.

6. For the balls. Suppose one, 14 feet diameter, made of plate-brass, weighing 3 ounces the square-foot — the circumference will be 44 feet [for, as 7 the diameter, to 22 the circumference; so is 14 feet, the diameter of this ball, to 44 its circumference] — the surface will contain 616 square feet [for, 44 the circumference, multiplied by 14 the diameter, gives 616] — the solid contents, 1437 feet and  $\frac{1}{3}$  [for,  $205\frac{1}{3}$  feet, the 3d part of the surface, multiplied by 7 the semi-diameter, gives  $1437\frac{1}{3}$ ] and — the weight will be 1848 ounces, or 1154 pounds [for, 616, the number of square feet in the whole, multiplied by 3 ounces the weight of one square foot, gives 1848.]

7. For the air: Suppose (what has been found by repeated experiments) that — one cubick foot of air weighs 1 ounce and  $\frac{1}{2}$  — a quantity of air, of the same bulk with the ball, will weigh 2155 ounces and  $\frac{2}{3}$ , or 179 pounds 7 ounces and  $\frac{2}{3}$  [for, 1437  $\frac{1}{3}$  feet, the capacity of the ball, or the quantity of air it contains, multiplied by  $1\frac{1}{2}$  ounce, the weight of one cubic foot of air, gives  $2155\frac{2}{3}$  ounces, the weight of the whole.]

8. For the difference: The air enclosed is 25 pounds 7 ounces and  $\frac{2}{3}$  heavier than the ball [for, 154 pounds, the weight of the ball, substracted from 179 pounds 7  $\frac{2}{3}$  ounces, the weight of the air contain'd in the ball; there remains 25 pounds 7  $\frac{2}{3}$  ounces] — So that

9. For the conclusion, it is plain, that The ball, (when the air is extracted, which it is well known may easily be done) being above 25 pounds specifically

specifically lighter, will not only float in the air, but carry up a considerable weight with it.

10. Upon the same principles, then, — Double the feet of plate-brass (1232, weighing 308 pounds), will make a ball 4 times bigger; so that the en-clos'd air will weigh 718 pounds 4 ounces and  $\frac{2}{3}$ ; consequently the ball, when the air is extracted, will be 410 pounds 4 ounces and  $\frac{2}{3}$  specifically lighter than air; and therefore will be able, of itself, to carry up 2 or 3 men. — Four, therefore, of these balls being fasten'd together, at due distance, by poles; and a boat hung to them by 4 equal ropes: we have a machine, that wants nothing but sails and oars for a voyage through the air. *Quod erat demonstrandum*

11. The only objection, of any weight, that I am aware-of, is, that a ball of the dimensions here described, would not sustain the pressure of the air; but be crush'd inwards. — But, this, I apprehend, will be set-aside by an experiment made by the great Mr. Boyle, in order to know what interest the figure of a body may have in resisting the pressure of a fluid. “ Having, says he (edit. Shaw, vol. 2. p. 415) blown a round glass-bubble, capable of containing five ounces of water, with a slender neck; we moderately emptied the receiver of an air-pump; and nimbly apply’d the neck of the bubble to the orifice of the bottom of it; and, after turning the key of the stop-cock, we made a free passage for the air to come out of the bubble into the receiver; which it did with great celerity, leaving the bubble as empty as the receiver itself. We then let-in the external air, which now press’d only on the out-side of the exhausted bubble, being prevented from getting within it: nevertheless, it continued as entire as before; the roundness of it’s figure enabling it, though almost as thin as pa-

“ per, to resist a pressure equal to that of the whole incumbent atmosphere. And, repeating the experiment, we found again that the pressure of the air, thrusting all the parts inwards, made them, by reason of their arched figure, so to support one another, that the glass would not break.”

### The Deluge

*the world's rejecting the government of god.*

THE reason of god's bringing the deluge on the world, we are told by the sacred historian (Gen. 6. 5.) was, “that the wickedness of man was great in the earth ; and that every imagination of the thoughts of his heart was only evil continually.” The particular account whereof is given (Gen. 6. 1-4, 11, 12, 13) in the following words ; which I apprehend, are to be understood as in the annexed paraphrase. “ And it came to pass, when mankind (or the corrupt seed of Cain) began to multiply on the face of the earth, and daughters were born unto them (that is, commonwealths, or civil governments were erected by them, Gen. 21. 25) that the (seed of Seth, who, by reason of the covenant which god seems to have made with them, Gen. 4.25, are called the) sons of god saw the daughters of men (to wit, the commonwealths set-up by Cain and his posterity) that they were (טוֹבָה) goodly and (being pleased with their beauty, strength, and order) they (not content with the hierarchy, or government,

“ment, which god had instituted among them; and regardless of his authority, who would have no other king or governor, but himself and his subordinates, Exod. 6, 7. 20, 3) took them wives of all which they chose (that is; after the example of the Cainites, at their own discretion, they set up civil governments among themselves) In those days there were giants (i. e. men of might and violence) in the earth; and, also afterwards (much more) when the sons of god came in unto (or incorporated with) the daughters of men; and they bare children unto them (dividing into distinct polities) and these were mighty men; who were, of old, men of renown. (Thus) all flesh had corrupted their way before the face of god (whose government and worship was, thus, rejected) and the earth was fill'd with violence (viz. injustice, rapine, oppression, and all those abominations, which naturally result from usurpation, ambition, tyranny, and idolatry)”

2. This interpretation seems aptly and easily to solve the difficulties that others are embarrass'd with. e.g. (1) Though it be no strange thing, or worth remarking, that, when the race of men began to multiply on the face of the earth, the number of women should also encrease; yet it is a very considerable piece of history to be told, that when men began to multiply upon the face of the earth; the monarchy, which was at first erected by Cain, divided itself into many (2) On this hypothesis we have a fair account, why, in the history of this matter, no mention is made of interchangeable marriages. this were justly to be wonder'd-at, on the literal interpretation: since, if the women of the church party were indeed guilty of this suppos'd offence; they seem to have been too considerable to be wholly pass'd-over in silence: and, if they were innocent; it were harder still to suppose, that this their eminent

gent virtue should neither turn to their praise, nor so much as serve for their protection. But, in the sense of this matter which I am now concern'd for, there seems to be no kind, or even appearance of difficulty: for, if it be ask'd how it comes to pass that the daughters of the church were not also married to the sons of men; 'tis very obvious to be answer'd, that, in that sense, in which daughters are said to be born to the children of men, or heathen part of the world, there were no such persons as daughters of the church. (3) And, hence we have also a fair account for the universality of this sin, for, though I cannot but think it strange that a whole world of people should every where be guilty of the same actual transgression; be it of what kind it will; yet it seems not at all strange to suppose that even so great a number of people may every one be involv'd in one common error or corruption: and, of all the practical errors in the world, I know of none which bids so fair for being, at any time, so universal; and which, indeed, has been always so much so, in fact, as this. (4) Herby, also, it is easy to account for the production and encrease of giants amongst men: for, in scripture, we shall find that the word "giant" is most frequently us'd for men of great power and authority. (V. Gen. 10. 81 Isa. 14. 9) Whereas, on the common scheme of interpretation, it is hard to conceive, that, because men married women whom they ought not to have had; therefore all, or any of their children should be giants; or persons of greater bulk, or stature than other people.

A D V E R T I S E M E N T.

IF any gentleman pleases to join issue with the author, in order to a fuller elucidation of any of these points; he is requested to publish his thoughts in the same form, size, letter, manner, &c. at least so far as he approves of it; for the greater uniformity of the work, and gratification of the reader.

